IN THE CLAIMS

Please amend the claims as follows:

1-48. (Cancelled)

49. (Previously Presented) A method, comprising:

forming a plurality of circuit elements on a substrate;

coating at least a portion of a surface of the substrate and at least one of the plurality of circuit elements with a mixture of oxide and carbon sources; and

transforming the mixture of oxide and carbon sources into a silicon oxycarbide having uniformly distributed voids that have an approximate diameter between 20 angstroms and 300 angstroms and which has a dielectric constant less than approximately 2.0.

50. (Previously Presented) The method of claim 49, wherein the mixture of oxide and carbon sources are selected from the group consisting of polymeric precursors, alkoxysilane, silicon alkoxide, methyldimethoxysilane (MDMS), and tetraethoxysilane (TEOS).

51. (Previously Presented) The method of claim 49, wherein transforming the mixture of oxide and carbon sources includes removing an excess portion of the silicon oxycarbide by chemical mechanical polishing (CMP) to obtain a desired thickness of the silicon oxycarbide.

52. (Previously Presented) The method of claim 49, wherein transforming includes hydrolyzing the mixture in the presence of an acid.

53. (Previously Presented) The method of claim 49, wherein transforming includes pyrolyzing the mixture.

54. (Previously Presented) A method, comprising:

providing a plurality of circuit elements on a substrate;

coating at least a portion of a surface of the substrate with a mixture of oxide and carbon sources;

transforming the mixture of oxide and carbon sources into a first porous oxycarbide glass dielectric layer on the integrated circuit and insulating first and second of the plurality of circuit elements from each other, the first porous oxycarbide glass dielectric layer having uniformly distributed voids that have an approximate diameter between 20 angstroms and 300 angstroms, wherein the first porous oxycarbide glass dielectric layer has a dielectric constant less than approximately 2.0;

selectively forming vias in the first porous oxycarbide glass dielectric layer for providing connection to the first and second circuit elements;

forming metal layers in the vias and elsewhere on a working surface of the substrate;

patterning and etching the metal layers to provide desired interconnection between the first and second circuit elements and other circuit elements or interconnection lines;

coating at least a portion of a surface of a substrate with a mixture of oxide and carbon sources; and

transforming the mixture of oxide and carbon sources into a second porous oxycarbide glass dielectric layer on the integrated circuit.

55. (Currently Amended) A method, comprising:

providing a plurality of transistors on a substrate;

coating at least a portion of a surface of the substrate with a mixture of oxide and carbon sources;

transforming the mixture of oxide and carbon sources into a first porous oxycarbide glass dielectric layer on the portion of the substrate surface and insulating first and second of the plurality of transistors from each other, the first porous oxycarbide glass dielectric layer having <u>uniformly distributed</u> voids that have an approximate diameter between 20 angstroms and 300 angstroms;

selectively forming vias in the first porous oxycarbide glass dielectric layer for providing connection to the first and second transistors;

forming metal layers in the vias and elsewhere on a working surface of the substrate;

patterning and etching the metal layers to provide desired interconnection between the first and second transistors and other circuit elements or interconnection lines;

thereafter coating at least a portion of a surface of a substrate with a second mixture of oxide and carbon sources;

transforming the second mixture of oxide and carbon sources into a second porous oxycarbide glass dielectric layer on the substrate; and

wherein the second porous oxycarbide glass dielectric layer has a dielectric constant less than approximately 2.0.

56. (Previously Presented) The method of claim 55, wherein the second porous oxycarbide glass dielectric layer has uniformly distributed voids that have an approximate diameter between 20 angstroms and 300 angstroms.

57. (Previously Presented) The method of claim 54, wherein the second porous oxycarbide glass dielectric layer has uniformly distributed voids that have an approximate diameter between 20 angstroms and 300 angstroms.

58. (Currently Amended) A method, comprising:

providing a plurality of circuit elements on a substrate;

coating at least a first portion of a surface of the substrate with a mixture of oxide and carbon sources;

transforming the mixture of oxide and carbon sources into a first porous oxycarbide glass dielectric layer on the first portion of the substrate surface and insulating first and second of the plurality of circuit elements from each other, the first porous oxycarbide glass dielectric layer having <u>essentially uniformly distributed</u> voids that have an approximate diameter between 20 angstroms and 300 angstroms;

selectively forming vias in the first porous oxycarbide glass dielectric layer for providing connection to the first and second circuit elements;

forming metal layers in the vias and elsewhere on a working surface of the substrate;

patterning and etching the metal layers to provide desired interconnection between the first and second circuit elements and other circuit elements or interconnection lines;

coating at least a second portion of a surface of a substrate with a mixture of oxide and carbon sources;

transforming the mixture of oxide and carbon sources into a second porous oxycarbide glass dielectric layer on the second portion of the substrate surface; and

wherein the first porous oxycarbide glass dielectric layer has a dielectric constant less than approximately 2.0.

59. (Previously Presented) A method, comprising:

forming a plurality of circuit elements on a substrate;

coating at least a portion of a surface of the substrate and at least one of the plurality of circuit elements with a mixture of oxide and carbon sources; and

transforming the mixture of oxide and carbon sources into a silicon oxycarbide having uniformly distributed voids that have an approximate diameter between 20 angstroms and 300 angstroms and a dielectric constant less than approximately 2.0.

60. (Previously Presented) The method of claim 59 wherein the mixture of oxide and carbon sources are selected from the group consisting of polymeric precursors, alkoxysilane, silicon alkoxide, methyldimethoxysilane (MDMS), and tetraethoxysilane (TEOS).

61. (Previously Presented) The method of claim 59, wherein transforming the mixture of oxide and carbon sources includes removing an excess portion of the silicon oxycarbide by chemical mechanical polishing (CMP) to obtain a desired thickness of the silicon oxycarbide.

62. (Previously Presented) The method of claim 59, wherein transforming includes hydrolyzing the mixture in the presence of an acid.

63. (Previously Presented) The method of claim 59, wherein transforming includes pyrolyzing the mixture.

64. (Previously Presented) A method, comprising:

forming a plurality of circuit elements on a substrate;

coating at least a portion of a surface of the substrate and at least one of the plurality of circuit elements with a mixture of oxide and carbon sources; and

transforming the mixture of oxide and carbon sources into a silicon oxycarbide having uniformly distributed voids that have an approximate diameter of 30 angstroms and a dielectric constant less than approximately 2.0.

65. (Previously Presented) The method of claim 64, wherein the mixture of oxide and carbon sources are selected from the group consisting of polymeric precursors, alkoxysilane, silicon alkoxide, methyldimethoxysilane (MDMS), and tetraethoxysilane (TEOS).

66. (Previously Presented) The method of claim 64, wherein transforming the mixture of oxide and carbon sources includes removing an excess portion of the silicon oxycarbide by chemical mechanical polishing (CMP) to obtain a desired thickness of the silicon oxycarbide.

67. (Previously Presented) The method of claim 64, wherein transforming includes hydrolyzing the mixture in the presence of an acid.

68. (Previously Presented) The method of claim 64, wherein transforming includes pyrolyzing the mixture.

69. (Previously Presented) A method, comprising:

forming a plurality of circuit elements on a substrate;

coating at least a portion of a surface of the substrate and at least one of the plurality of circuit elements with a mixture of oxide and carbon sources; and

transforming the mixture of oxide and carbon sources into a silicon oxycarbide having uniformly distributed voids that have an approximate diameter of 200 angstroms.

70. (Previously Presented) The method of claim 69, wherein the mixture of oxide and carbon sources are selected from the group consisting of polymeric precursors, alkoxysilane, silicon alkoxide, methyldimethoxysilane (MDMS), and tetraethoxysilane (TEOS).

71. (Previously Presented) The method of claim 69, wherein transforming the mixture of oxide and carbon sources includes removing an excess portion of the silicon oxycarbide by chemical mechanical polishing (CMP) to obtain a desired thickness of the silicon oxycarbide.

72. (Previously Presented) The method of claim 69, wherein transforming includes hydrolyzing the mixture in the presence of an acid.

73. (Previously Presented) The method of claim 69, wherein transforming includes pyrolyzing the mixture.

74-76 (Cancelled)

77. (Previously Presented) A method, comprising:

coating at least a portion of a surface of the substrate with a mixture of oxide and carbon sources; and

transforming the mixture of oxide and carbon sources into a silicon oxycarbide having uniformly distributed voids that have an approximate diameter between 20 angstroms and 300 angstroms and which has a dielectric constant less than approximately 2.0.

78. (Cancelled)

79. (Previously Presented) A method, comprising:

coating at least a portion of a surface of the substrate with a mixture of oxide and carbon sources; and

transforming the mixture of oxide and carbon sources into a silicon oxycarbide having uniformly distributed voids that have an approximate diameter of 30 angstroms and having a dielectric constant less than approximately 2.0.

80. (Previously Presented) A method, comprising:

coating at least a portion of a surface of the substrate with a mixture of oxide and carbon sources; and

transforming the mixture of oxide and carbon sources into a silicon oxycarbide having uniformly distributed voids that have an approximate diameter of 200 angstroms.

81. (Previously Presented) The method of claim 54, wherein the second porous oxycarbide glass dielectric layer has a dielectric constant less than approximately 2.0.

82. (Previously Presented) The method of claim 55, wherein the voids of the second porous oxycarbide glass dielectric layer are uniformly distributed.

83. (Previously Presented) The method of claim 55, wherein the first porous oxycarbide glass dielectric layer has a dielectric constant less than approximately 2.0.